Cultural Sequence in Western Kyushu

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KYUSHU prehistory has long interested archaeologists concerned with broad issues of culture history and culture change in Japan. Foci of attention have included the alleged early preceramic finds at Sozudai, the very early ceramics of Fukui Cave, the relationship of the Sobata period of Early Jomon with developments on the Asian mainland and in the New World, and the introduction and spread of agriculture. At present, however, an understanding of most of these events and issues is clouded by a lack of basic data.

This paper will discuss earlier Jomon through the Sobata period with special reference to stratigraphic sequence and diagnostic ceramic and lithic developments, primarily using evidence from excavations conducted by the authors at the Hime site (Nagasaki Prefecture) in 1966. A detailed report on this work has been prepared and will appear later.

The basic ceramic stratigraphy for Initial Jomon in western Kyushu has been defined at Fukui Cave, where the sequence established is linear appliqué pottery, *tsumegatamon*, then *oshigatamon* (Kamaki 1965, Kamaki and Serizawa 1965). However, the diagnostic ceramic developments for the following Early Jomon have been a matter of disagreement, in some cases because sites were not sharply stratified, in others because the analyses were not handled in a way that clearly defined the changes. Although Kobayashi (1939: 14–15) suggested, on the basis of stratigraphic trends, that Todoroki preceded Sobata, Kagawa (1965: 272 ff.) has more recently expressed the view that Sobata is earlier, basing his observations on the association with *oshigatamon* of pottery he believed to be affiliated with Sobata and the presence of such pottery stratigraphically above *oshigatamon* and below "Todoroki." Matsumoto and Togashi restudied the Todoroki site and in an influential paper (Matsumoto and Togashi 1961) concluded that there are several varieties of what has been called Todoroki. Applying this typology to the Ota

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shellmound, Otomasu (1965: 254) has suggested that some are earlier and others later than Sobata. In general the foregoing discussions are restricted to ceramic developments; the quantity of other artifact material and numbers of associated burials and features have been so small that definition of the periods in more than ceramic terms has not been possible. The excavation of the Hime site not only provides clear stratigraphic evidence of the Todoroki/Sobata relationship but also shows the sequence to be somewhat more complicated than previously believed, and for the first time has produced sufficient stone material to form the basis of a more comprehensive characterization of the cultural periods.

The Hime site is located about 70 km west of Fukuoka at Mikuria in northern Nagasaki Prefecture (Fig. 1). The occupation area extends along the edge of

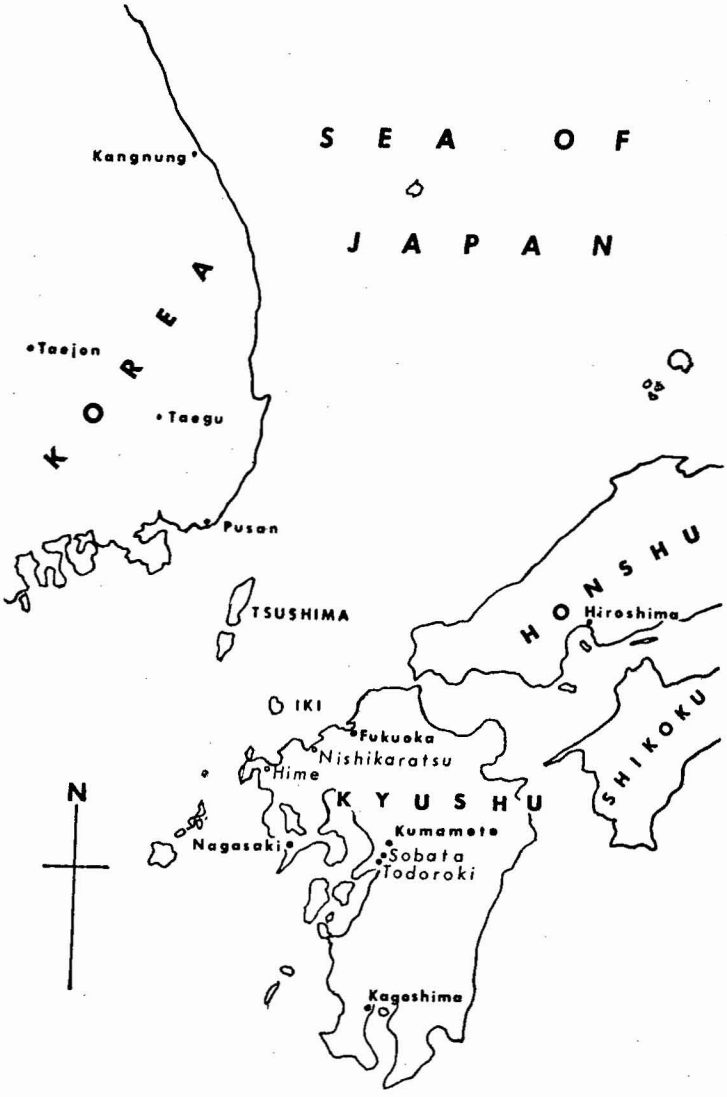

Fig. 1 Map of Kyushu and adjoining region showing the locations of some sites mentioned in the text.

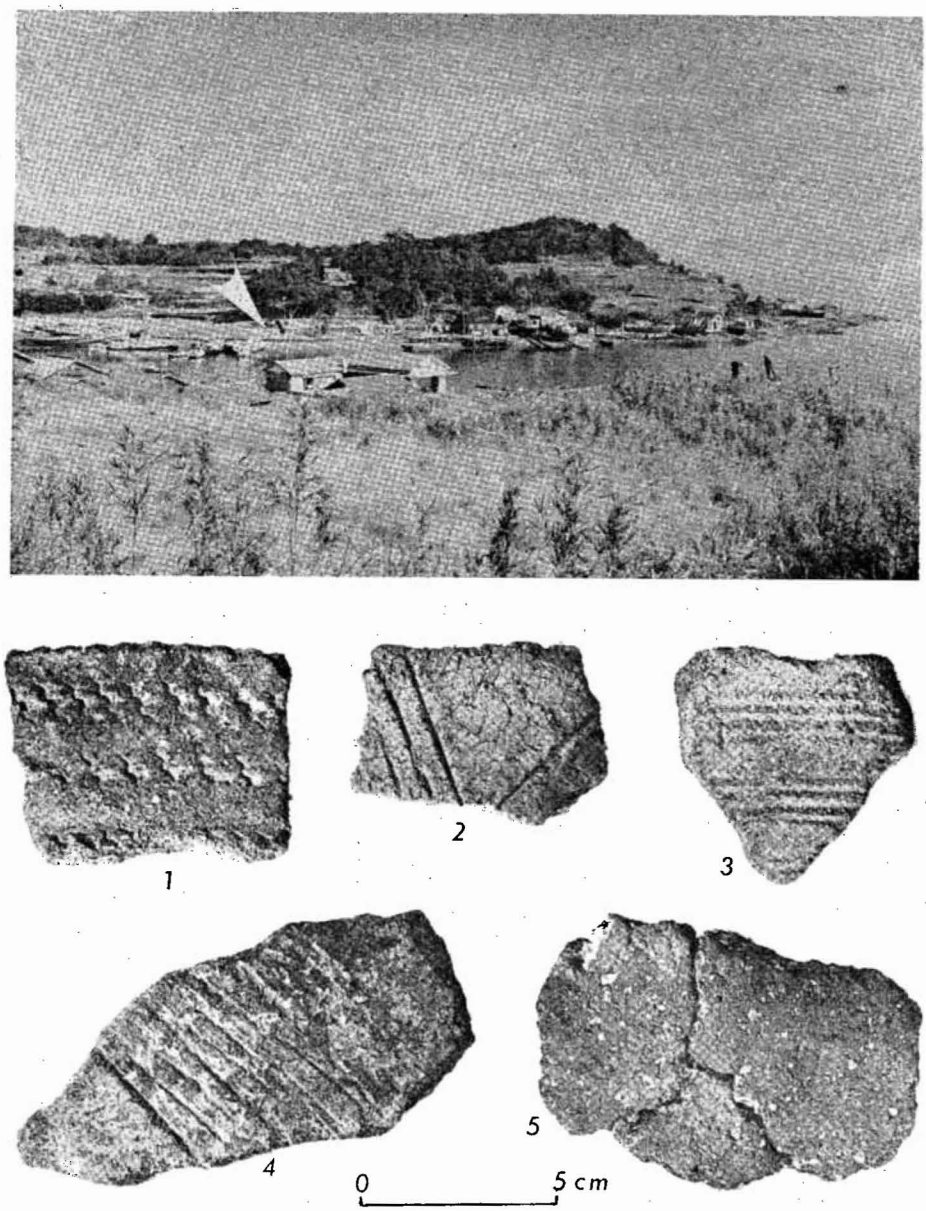

Plate I *top,* Looking west toward Hime site (area of trees and buildings in center) and Mikuria Bay (right), arrow indicating area of 1966 excavations; *bottom,* Hime Decorated *(1–4)* and Hime Plain *(5)* pottery.

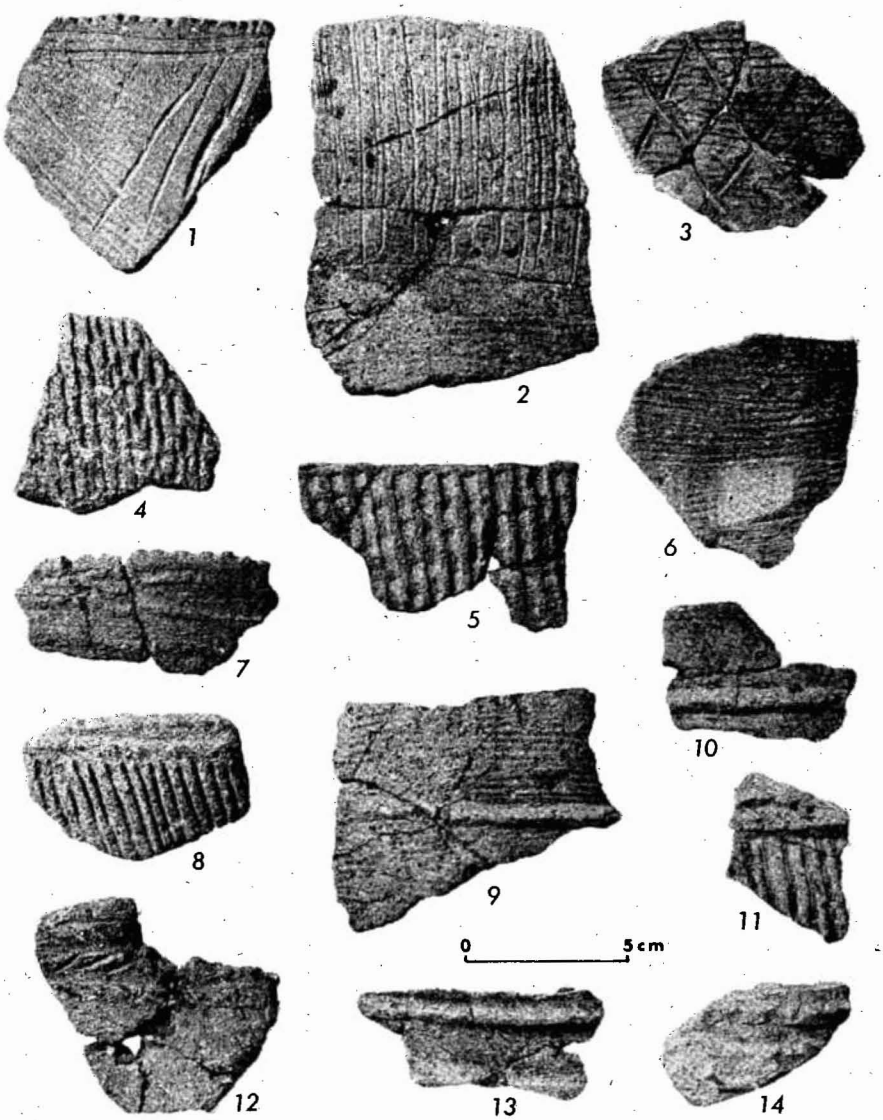

Plate II Todoroki Decorated *(1–5)*, Todoroki Plain *(6)* and Todoroki Appliqué *(7–14)*.

Mikuria Bay for a distance of 120 m and is dominated by a steep hill to the west (Pl. I, *top*). The location offered several apparent advantages to its occupants: a sheltered beach for small boats, access to good fishing areas along the peninsula to the north, and springs of fresh water at the base of the hill.

The principal excavation, located at the north end of the site (indicated by arrow in Pl. I, *top*), covered an area of 27 sq. m and varied in depth between 1.0 and 2.0 m. Important events in the accumulation of the midden and the related cultural stratigraphy will be summarized in chronological order with reference to a representative diagram of the physical stratigraphy (Fig. 2).

At the base of the stratigraphic column (Fig. 2) is a culturally sterile rock-filled yellowish brown clay (a). Stratum b, overlying "a," appears to be a soil developed on "a," but disturbed and modified by the earliest occupation of the site. As this, the Hime occupation continued, a dark brown clayey sand (c) started to accumulate.

Hime Plain and Decorated pottery (Pl. I, *bottom*) is coiled, red to brown, with abundant coarse quartz temper and irregular surfaces. Vessels have medium to thick walls, are usually conical in shape, up to 30 cm in diameter, with flat (occasionally rounded) bases and direct rims; some have globular bodies as much as 40 cm in diameter, with cylindrical necks. About three-fourths of the decorated pieces are embellished with incised designs of diagonal, horizontal, or, occasionally, wavy lines (Pl. I, *bottom, 2–4*); most of the remainder have lines of impressions made with the crenulated edge of a shell (Pl. I, *bottom, 1*). Ticked rims are common.

Although there is some bedding there is no clear physical break within Stratum c (Fig. 2), but culturally there is a change in the ceramics to a thinner heavily scraped ware which we identify with the well-known Todoroki period. The picture is one suggestive of transition from Hime to Todoroki with no hiatus in occupation. The Todoroki accumulation, however, is interrupted by a heavy layer of water-worn rock and fine sand (d^1) doubtless derived from the former beach to the west and, locally, by a clayey phase (d^2) in which wash from the hillside is included. Above this, in Stratum e, a yellowish to reddish brown clayey sand, Todoroki occupation continues.

In Todoroki pottery (Pl. II) steatite temper is introduced, at first used in a minority of the vessels but later becoming dominant over the quartz temper. Vessel walls, especially those where steatite tempering is used, are thinner than those of Hime pottery. The conical-bodied flat-bottomed form with direct rim continues, but a conical-bodied round-bottomed style is favored. Vessel diameters reach 25–30 cm. Deep bowls were also made, some with direct, some with recurved rims; shouldered vessels also occur. Interior and exterior surfaces are textured with horizontal marks of a shell scraper, but these are sometimes smoothed over on the exterior if decoration is added.

There are a number of design elements in Todoroki Decorated. Some sherds have scratchy incision of diagonal, vertical, or horizontal parallel lines and sometimes cross-hatch (Pl. II, *1–3*). Other vessels have rows of stamped oval or elongate impressions or vertical jab-and-drag (Pl. II, *4–5*). Often the decoration is near or pendant from the rim. Todoroki Appliqué (Pl. II, *7–14*) vessels have decorative fillets affixed to the surface or have decoration produced by forcing up ridges of clay. Only a small percentage of the appliqué is indented (Pl. II, *12*). Decoration is mostly on the body proper, only occasionally close to the rim. About 8 percent of

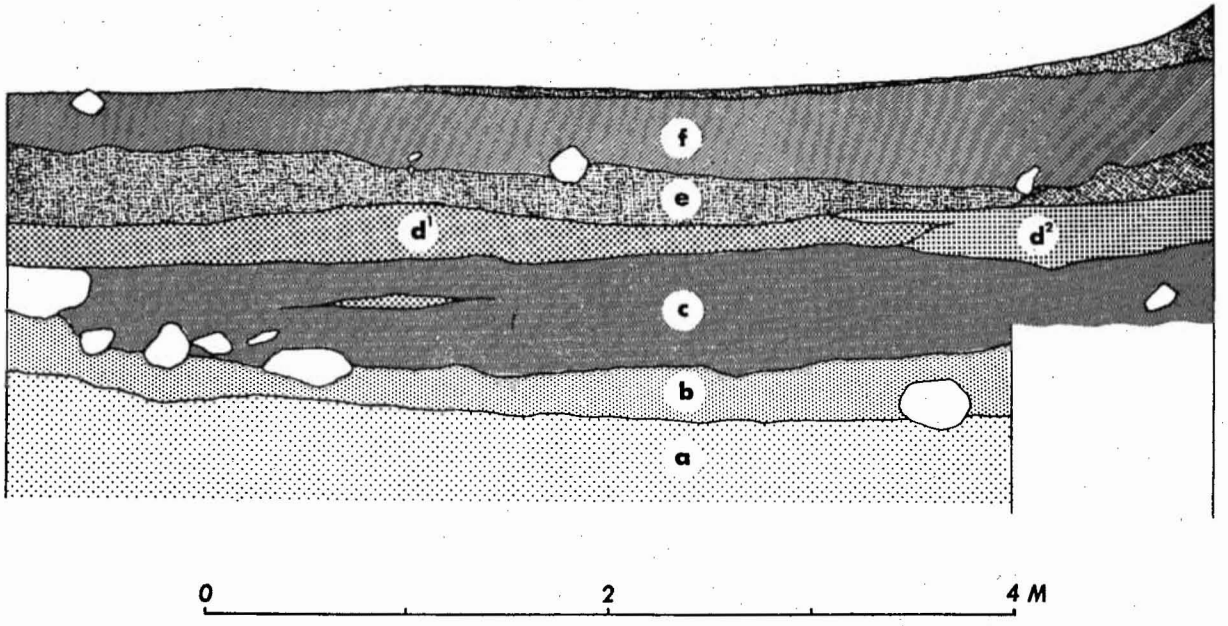

Fig. 2 Representative profile from main excavation at Hime site. See text for explanation.

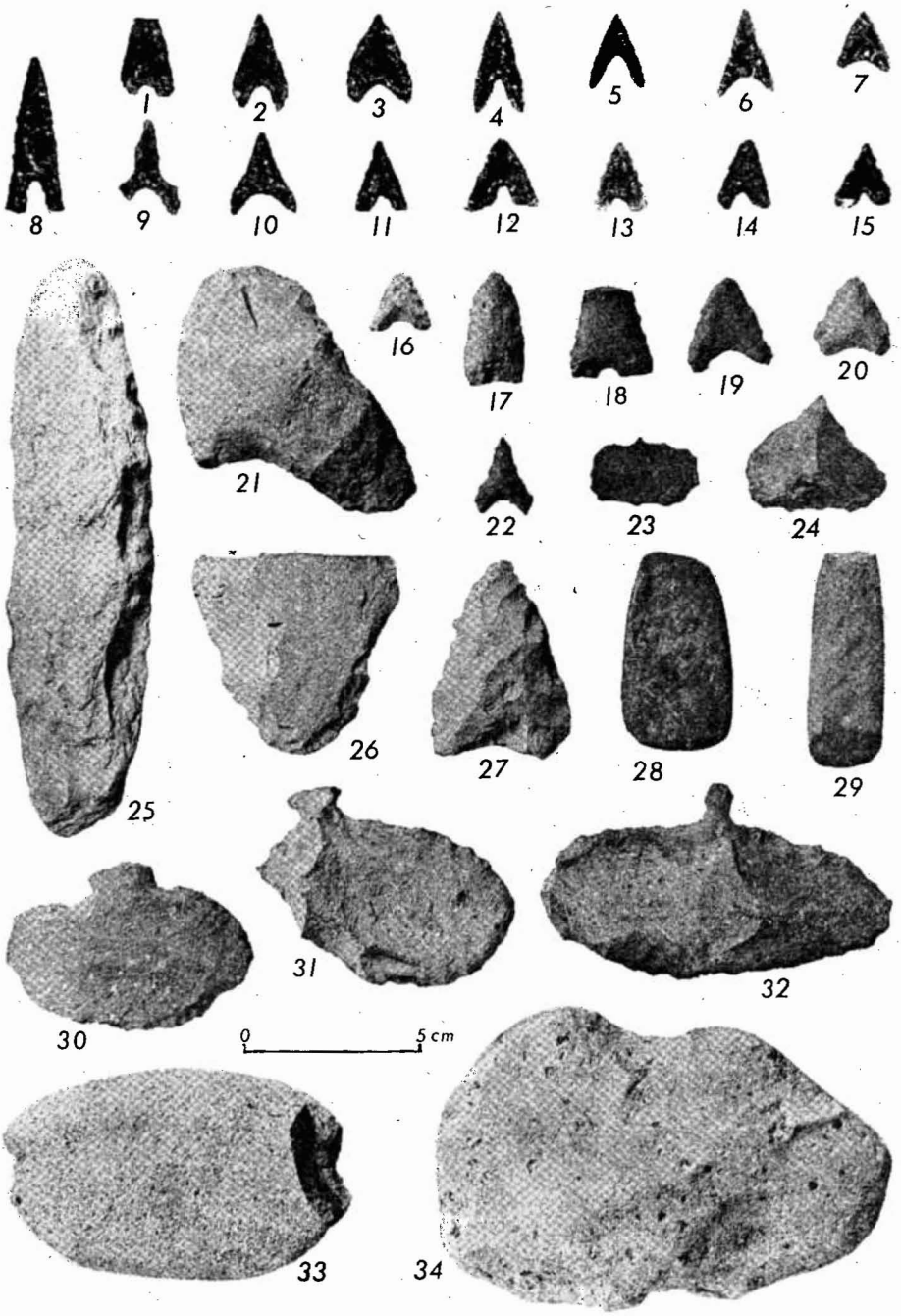

Plate III Projectile points *(1–20, 22)*, oblique knife *(21)*, fine borer *(23)*, pointed graver *(24)*, heavy bifacial knives and points *(25–27)*, small adzes or chisels *(28–29)*, broad-stemmed knife *(30)*, narrow-stemmed knives *(31–32)*, end-notched sinker *(33)*, and side-notched sinker *(34)*.

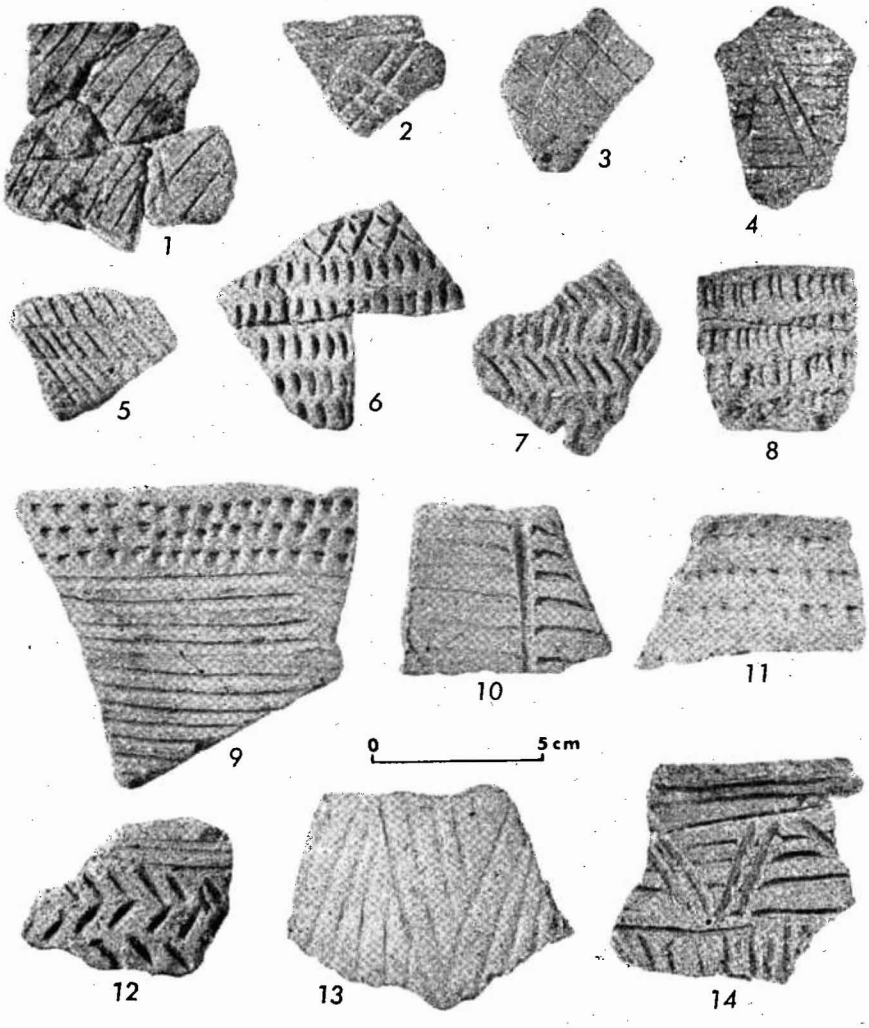

Plate IV Nishikaratsu Decorated *(1–8)* and Sobata Decorated *(9–14)* pottery.

the sherds combine incised or stamped decoration with appliqué (Pl. II, *8, 11*). Rim ticking (Pl. II, *1*), so common during the Hime period, is found on about one-third of the vessels.

The evidence indicates a close relationship between the stone industries of the Hime and Todoroki periods, although these are not identical. Unfortunately, the sample of some types, and that from the Hime levels as a whole, is relatively small, so the data are somewhat uneven.

On the basis of present evidence, heavy bifacial knives and points (Pl. III, *25–27*) appear to be concentrated in the Hime and Todoroki levels. Projectile points which seem to be particularly typical of both periods include those illustrated in Plate III, *1–3* and *16–20,* perhaps also Plate III, *4–7* and *13;* those found primarily in Todoroki alone, Plate III, *8–10* and *22*. Fine borers and pointed gravers, oblique knives, end-notched sinkers, small adzes or chisels (Pl. III, *23–24, 28–29, 31*) and fine-edged scrapers also are typical of these early periods. The knives found in the Hime level are remarkable for their very narrow, often knoblike, stems, not exceeding 1.3 cm in width (Pl. III, *31–32*). These "narrow-stemmed knives" continue into the Todoroki period at the Hime Site, but specimens with broad stems (Pl. III, *30*), that is, ones with a width of 1.4 cm or more, are used in equal or slightly greater numbers and become dominant by the Sobata period. Tools which are found in these lower levels but which continue on into later periods without apparent change in form include axes and large adzes, pebble and cobble hammerstones, handstones, and grinding slabs.

In the ceramic analysis of the Hime site it was observed that a numerically minor but stylistically distinct pottery was being made in the Todoroki period and also occurred in very small quantities in the overlying Sobata deposit. Its fine linear decoration was distinct from the bold treatment of the Sobata pottery but faintly suggestive of Sobata design (Pl. IV, *1–8*). Owing to this resemblance and because of its stratigraphic position, the pottery was initially called Proto-Sobata. Several years later it was possible to examine a number of collections from Kyushu, and Matsuoka Hitoshi was good enough to allow us to study the "Sobata" material from the flooded site at Nishikaratsu (Matsuo 1955; Sugimura 1965: 2–3). A high percentage of the pottery from the latter locality proved to be of our Proto-Sobata type, a strong indication that this style, which it now seems appropriate to call Nishikaratsu, is diagnostic of a distinct ceramic period. On the evidence of the Hime Site, this period follows Todoroki and precedes the period of classic, bold Sobata decoration like that found at the Sobata site and at Hime.

Basing our observations primarily on the collection from the Todoroki level of the Hime site, this Nishikaratsu Decorated pottery is similar in paste to Todoroki pottery; about 80 percent is steatite tempered, the remainder quartz tempered with some internal indications that the latter becomes less important by the time the style wanes. As in Todoroki pottery, interiors retain scraping marks, but these are usually obliterated on the exterior before decoration.

Vessels were bowls and pots with flaring mouths, 16 to 30 cm in diameter, mostly with round but some with flat bottoms and direct or everted tapered rims, often with flat lips. Decoration is usually close to the rim, predominantly fine-line incision (Pl. IV, *1–4*) in diagonal bands of hatchure or cross hatchure (37%) or

horizontal bands of rectangular stamped impressions (Pl. IV, *7–8*), either plain (23%) or jab-and-drag (21%). The remainder are slightly bolder incised decorations (Pl. IV, *5*) similar to the first group or combinations of the above. Sixty percent of the vessels had ticked rims.

The Sobata occupation was coextensive with Stratum f, a dark brown to dark reddish brown sandy clay with considerable quantities of waterworn basalt pebbles (Fig. 2), and overlay Stratum e, the Todoroki layer. In most of the area excavated, Stratum f was truncated by recent grading, but one relatively undisturbed exposure showed its thickness to be between 45 and 60 cm.

The diagnostic ceramic of this "classic" Sobata period is Sobata Decorated (Pl. IV, *9–14*). Vessels were mostly round-bottomed pots 24 to 42 cm in diameter with slightly constricted mouths; rims were usually everted but occasionally direct. Steatite temper is used almost exclusively at the Hime site and the paste is quite soft. Vessels were coiled and scraped, but evidence of scraping was smoothed over on all surfaces which were to be decorated, that is, the whole exterior and the interior at the mouth. The exterior decoration was usually organized in horizontal bands of bold, incised, parallel lines. Occasionally a band at the rim was composed of punctate or lines of jab-and-drag. A very distinctive feature of Sobata Decorated pottery is the embellishment of the interior of the rim with a band of parallel horizontal lines, interrupted horizontal lines, and so forth. Ticking of the lip was nearly universal (99.6%). Tubular and solid cylindrical style tools appear to be used for most decoration in contrast to the sometimes angular, sometimes flat implements used on Todoroki and Nishikaratsu pottery.

Equally diagnostic of the Sobata period are two undecorated types. Sobata Plain is made from the same paste as Sobata Decorated but has smooth surfaces. Vessel form differs in that bottoms are either slightly flattened or occasionally of the disk or semi-footed type. Sobata Scraped appears similar except that the exterior is textured by random scraping marks.

Certain changes in the associated stonework set off the Sobata period from Todoroki, but since we do not have comparable material for Nishikaratsu, we do not know when these changes occurred. In general, it appears that the more carefully fashioned objects diminish in importance and the more roughly made forms persist or increase. Except for one stubby, triangular projectile point with small basal notch (Pl. III, *11–12*) few styles can be said to have diagnostic value.

Abraders and anvils were found only in the Sobata deposit, but this is probably a function of the small sample. Several types are introduced which continue on into Middle Jomon proper, however. These include small, thick, poorly made triangular projectile points with concave bases (Pl. III, *14*) which are worked bifacially and others with substantial areas of original flake surface preserved on one face (Pl. III, *15*), perhaps a tendency toward economy of effort which reaches its peak in the flake arrow heads of later times. Side-notched sinkers are also introduced in place of the end-notched ones.

An undisturbed stratum overlying Sobata was preserved in only one small area of the Hime excavation. Although this showed that Nampukuji and related types and also Namiki follow Sobata the evidence here was not sufficient to judge the nature of the transition from the previous period.

DISCUSSION

The recognition of the Hime period in clear stratigraphic relationship to Todoroki and other later periods is a significant addition to the understanding of cultural development in western Kyushu; for the first time an insight into the nature of the transition from Initial to Early Jomon is obtained. One may see in the thick pottery with irregular surfaces and the projectile point forms a continuation of patterns found in the late Initial Jomon of the region, but the complex vessel shapes are a marked departure from the earlier styles as is the decoration.

The Hime site also provides significant data bearing on the question of the priority of Todoroki or Sobata, and the definition and development of these periods. In keeping with the scope of this paper our remarks on these points will be brief and somewhat selective. As early as 1939, Kobayashi (1939: 14–15) published stratigraphic information showing by trends in the percentage of types that Todoroki preceded Sobata. Yet twenty-five years later the lack of recognized clear-cut superimposition has permitted two viewpoints to coexist, one that Sobata was earlier, the other that Todoroki was the older; these are prominently contrasted in companion sections of the second volume of *Nihon no Kokogaku* (Kagawa 1965: 272 ff.; Otomasu 1965: 254, Fig. 7). This situation developed because the stratigraphic members of key sites such as Todoroki and Sobata were not successfully separated, and because, in the case of Todoroki, the ceramics were not analyzed in such a way as to clearly define chronological differences. The Hime site, as we have shown, does offer clear-cut evidence that Todoroki precedes Sobata, and in later excavation at Sobata shellmound Esaka (personal communication) has evidently found the same sequence for the Kumamoto region. It appears that this sequence also may be seen in the recent excavations at Todoroki shellmound, although this is obscured by the investigators' disinclination to recognize one of their strata as Sobata and their inclusion of some Sobata pottery in their Todoroki type D (Matsumoto and Togashi 1961: 166–169, 188).

There has long been a tendency to include in Todoroki a great variety of pottery with scraped surfaces and diverse appliqué decoration, features which are widespread geographically and of long temporal vitality, and, therefore, of limited utility in defining the ceramic development of the region. Refinement of Todoroki as a type was imperative for it to be used in chronological studies. The first important step was made by Matsumoto and Togashi (1961), who reported on material from the 1958 excavations at the Todoroki site. They proposed four Todoroki types:

Todoroki 'A'. Wide mouthed vessels with conoidal or round base, thin walls, and direct rim; surfaces shell-scraped; some decorated by shell scraping with triangular, herringbone, or other geometric designs.

Todoroki 'B'. Form similar to A but including some flat bases; linear appliqué decoration in horizontal, diagonal, or vertical lines over shell-scraped surfaces.

Todoroki 'C'. Form similar to A; incised curvilinear decoration or parallel lines, usually diagonal, on scraped surface (varieties I and II), or lines of jab-and-drag and/or intersecting groups of diagonal parallel lines made with the lip of a shell (variety III).

Todoroki 'D'. Bases round or flat, some peaked rims, decoration of broken multiple horizontal lines, horizontal lines of punctates, sometimes on scraped surfaces, sometimes on interior of vessel mouths as well as exterior (varieties I and II), or broad bands of jab-and-drag made with shell or spatula (variety III).

Because of the many previous excavations at the Todoroki site it was very difficult to find undisturbed areas, but Matsumoto and Togashi believed that the lowest levels of several pits and one nearly complete section of another could be used for stratigraphic purposes. Although the lowest stratum of the site was generally not more than 25 cm thick, within this the authors found that Type A occurred alone in the lower part but was associated with Type B in the upper part. They consider types C and D to be later, in the case of C because a few sherds were found in an overlying stratum. The text indicates, however, that Type C sherds are also found in place in the lowest stratum in association with types A and B. Most Todoroki D sherds are from disturbed areas, and nothing is known of the stratigraphic position of varieties II and III. Variety D-I is essentially Sobata pottery and occurs primarily in the level above Todoroki A, B, and C, although a few sherds are found with the latter. Given the thinness of the lowest stratum, the high level of disturbance from previous excavation, and apparently the very small sample of sherds believed to be from undisturbed areas, we feel that the fine stratigraphic distinctions suggested between Todoroki A, B, and C must be viewed with reserve. From the vantage point of our excavations, it appears that they had a thin level of Todoroki ceramically marked by pottery similar to our Todoroki Scraped and Decorated (their Type A and some C) and by Todoroki Appliqué (their Type B), but with an admixture of some Hime (included in Type C). That some earlier occupation of the site occurred also seems to be indicated by an *oshigatamon* sherd also found in this layer (Matsumoto and Togashi 1961: 169).

Professor Otomasu (1965: 254) reported that Todoroki C and D pottery was found stratigraphically above Sobata at the Ota shellmound. Given the mixed nature of these types and the fact that some of Todoroki D is Sobata, we do not consider this to contradict the position taken here.

In suggesting the existence of a ceramically distinct Nishikaratsu period between Todoroki and the classic Sobata, we have used evidence of a type that has led to some of the misinterpretations of Kyushu's chronology in the past. Although conclusive data are lacking, we consider the proposal worthy of consideration. It would appear at first glance that a similar idea has been advanced by Sugimura. He has suggested that pottery from Karatsu is an earlier Sobata than that from Sobata shellmound, which in turn predates Higachiyama in the south (Sugimura 1965: 41). However, Sugimura apparently was referring to variations within the classic Sobata pattern, and the presence of what we call Nishikaratsu pottery seems not to have been the issue. This can be inferred from his illustrations, where of 20 potsherds shown, all but one or two are of the "classic" type, and from the details of his discussion (see also Otomasu 1965: 253). Although the Sobata pottery appears to range greatly in vessel shape and decorative design, present evidence does not encourage us to speculate to what extent variations are related to chronology and to what degree to regional differentiation. A fruitful attack on this problem

will depend on the publication of detailed quantitative analyses of Sobata collections.*

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